

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method, comprising:
~~applying a laser beam photo-thermal energy to a layer of first material disposed on a layer of second material to diffuse a portion of the first material into the second material, wherein the laser beam penetrates beyond the first material and into the second material, by ablating a portion of the first material into a plasma.~~
2. (currently amended) The method of claim 1, wherein:
~~the photo-thermal energy laser beam~~ is provided by one of a YAG laser, a CO₂ laser, or an infrared laser.
3. (currently amended) The method of claim 1 wherein:
the second material includes metal; and
applying the photo-thermal energy laser beam forms an electrically conductive trace.
4. (previously presented) The method of claim 3, wherein:
the first material includes tin, the second material includes copper, and the electrically conductive trace includes a copper tin alloy.

5. (currently amended) The method of claim 3, wherein:

~~the photo-thermal energy includes a laser beam having~~ has a width between about 2 mils and about 8 mils.

6-10 (cancelled)

11. (currently amended) A method comprising:

forming a metal layer on a core;

placing a diffusion layer on the metal layer; and

applying photo-thermal energy via laser beam to the diffusion layer to diffuse a portion of the diffusion layer into the metal layer, wherein the laser beam penetrates beyond the diffusion layer and into the metal layer by ablating a portion of the first material into a plasma.

12-26 (cancelled)

27. (previously presented) The method of claim 1, wherein:

the first material comprises a bottom surface and the first material diffuses into the second material such that an alloy is formed below the bottom surface of the first material.

28. (currently amended) The method of claim 1, wherein:

the photo-thermal energy laser beam causes a portion of the second material to ablate into a plasma.

29. (currently amended) The method of claim 1, wherein:

the photo-thermal energy laser beam is provided by a laser programmed to pattern a desired pattern of electrically conductive traces.

30. (previously presented) The method of claim 3, further comprising:

removing non-diffused portions of the layer of first material.

31. (previously presented) The method of claim 11, wherein:

the metal layer comprises copper and the diffusion layer comprises at least one of an organic material, a polymer epoxy, or an organic metal.

32. (new) The method of claim 27, wherein:

the alloy is formed entirely below the bottom surface of the first material.

33. (new) The method of claim 30, wherein:

removing non-diffused portions of the layer of first material comprises chemical mechanical polishing.

34. (new) The method of claim 30, wherein:

forming the electrically conductive trace comprises forming the electrically conductive trace with a 20%-30% larger width than a desired width, the desired width being obtained after removing non-diffused portions of the layer of first material.